Testimony of Dr. John Clifford
Deputy Administrator for Veterinary Services
Animal and Plant Health Inspection Service
U.S. Department of Agriculture

Before the House Committee on Homeland Security's
Subcommittee on the Prevention of Nuclear and Biological Attacks
Hearing on "Creating a Nationwide, Integrated Biosurveillance Network"
May 11, 2006

Chairman Linder, Ranking Member Langevin, and Members of the Subcommittee, thank you for holding this hearing today and for the opportunity to testify before you. My name is Dr. John Clifford and I am the Deputy Administrator for Veterinary Services with the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). In this position, I also serve as USDA's Chief Veterinary Officer.

Today, the Committee is looking at an important issue – the Federal government's plan for the coordinated evaluation of all biosurveillance information collected in the United States. We at USDA are actively engaged in this effort, both internally and with our colleagues from the U.S. Department of Homeland Security (DHS). I am very pleased to provide the following outline of our animal health surveillance programs and how we plan to further analyze this information and provide our findings to the National Biosurveillance Integration System (NBIS).

Overview of USDA's Animal Health Surveillance and Safeguarding Programs

USDA has been working for decades to enhance and refine our ability to collect information regarding the health of our Nation's livestock, as well as the food supply. The information we collect through these surveillance and monitoring channels, including our off-shore pest and disease monitoring efforts; cooperative animal disease testing programs; and the established networks of laboratories that support our domestic animal disease testing programs, has long served as the basis for our regulatory, policy, and operational decisions regarding U.S. animal health and food safety. In addition, utilizing this information, we routinely make adjustments to the strong system of overlapping safeguards we have in place to guard against the entry of potentially damaging agricultural pests and diseases that are exotic to the United States.

Generally speaking, these safeguarding systems are comprised of components such as overseas monitoring of disease events, import restrictions, surveillance efforts here in the United States, the measures we take to eradicate and control disease, and the regulation of slaughter practices to protect the food supply. In a nutshell, by understanding the potential pest and disease threats to U.S. agriculture as they exist in other countries, we can take the necessary steps to keep the pests and diseases out of the country, while also looking for any signs of them within our borders. Should our

surveillance detect one of these pests or diseases, we would then mount an aggressive control and eradication program, while also closing the pathway responsible for the introduction.

We customize the safeguarding systems to meet the unique challenges significant foreign agricultural pests or diseases present to our domestic industries. Therefore, our safeguarding systems against viral animal diseases, such as swine vesicular disease, take into account different risks and corresponding import controls (live swine and swine products are prohibited entry into the United States from countries affected by the disease) than our safeguarding systems against exotic pests, like some species of ticks, that can be mitigated by treating the animals with a pesticide prior to their entry into the United States. But in all cases, our safeguarding systems complement one another in that they draw on our extensive animal health surveillance systems and have one main objective: protecting the health and marketability of U.S. agriculture and the domestic food supply.

USDA's animal health safeguarding systems have largely stayed ahead of evolving risks and have been highly effective in preventing the introduction of serious animal diseases, such as foot-and-mouth disease and highly pathogenic avian influenza (HPAI), into the United States. As you know, diseases such as HPAI can also have some human health implications, so it is essential that we remain vigilant and ensure that we have robust emergency response plans and capabilities at the ready.

A recent case in point is our swift response to a detection of HPAI in a flock of 6,600 birds in Texas in 2004. By quickly becoming aware of the situation and working with industry and State officials to depopulate the flock, carry out onsite cleaning and disinfection, and look for signs of disease in surrounding operations, we prevented further spread of the virus. We also prevented a costlier eradication program by USDA and State officials, as well as protracted trade restrictions on U.S. poultry and poultry products by our trading partners.

I want to note here that emergency response campaigns actually begin with effective awareness of the international animal health situation. APHIS maintains this awareness through several different avenues, including by participating in international animal health organization, or OIE, meetings; placing safeguarding officers overseas to collect information on foreign pests and diseases in their countries of origin; and monitoring open source information for indications of serious international animal health events. In total, this information allows us to take proactive, preventive measures in response to specific threats before we are faced with potential introductions within our borders.

The next component is rapid domestic detection of a foreign animal disease soon after incursion—before the disease spreads further in the susceptible animal population, or populations. By maintaining robust animal disease surveillance programs in the United States, we are also making a significant investment in our emergency preparedness and response capabilities. Recognizing the critical nature of these

programs, APHIS' fiscal year (FY) 2007 budget included approximately $156 million for our animal health monitoring and surveillance (AHMS) activities, an increase of $10 million, or seven percent above the (FY) 2006 enacted. Overall, this is an increase of $81 million (+109%) since FY 2001.

USDA's Food and Agriculture Biosurveillance Integration System (FABIS)

Since September 11, 2001, USDA has also made great strides to expand our mission to include security. The Department has been working closely with its Federal, State, and local government partners, as well as with industry stakeholders to address these concerns and others via a sector-wide strategy based on White House guidance.

We are relying upon guidance provided in Homeland Security Presidential Directive (HSPD)-7: *Critical Infrastructure Identification, Prioritization, and Protection*, HSPD-9: *Defense of U.S. Agriculture and Food*, and HSPD-10: *Biodefense for the 21st Century*, as well as the guidelines under Emergency Support Function 11 (protection of agriculture and natural resources) under the National Response Plan, to strengthen our preparedness for intentional acts of terrorism against food and agriculture and for enhancements to current programs designed to prevent or control the unintentional introduction of agents, pests, and diseases that could harm our sector.

One of USDA's key goals is to expand the surveillance and monitoring systems to provide early detection and tracing of diseases and outbreaks. In addition to expanding our systems, it is important to integrate them at a higher level, enabling us to notice aberrations across mission areas and across sectors. Intelligence is also essential to awareness and warning so that we are knowledgeable of any information related to potential acts of bioterrorism.

In October, 2004, when DHS officials were engaged in the design of the NBIS and convened the first inter-agency National Biosurveillance Group meeting to begin evaluating additional streams of data into the system, it was clear that information related to domestic agriculture and food safety would be critical to the overall effectiveness of the system.

As a result of careful consideration, in February, 2005, USDA decided to develop a new in-house Food and Agriculture Biosurveillance Integration System (FABIS) to accomplish two primary goals: (1) achieve the high-level integration of APHIS' animal health surveillance data with information from the Food Safety and Inspection Service's (FSIS) food safety and testing programs to support our homeland security responsibilities; and (2) develop a system that also provides the NBIS with concise, analyzed data that can be evaluated as part of a complete assessment of U.S. biosecurity.

Currently, USDA is developing a concept of operations plan for the FABIS. Efforts are also underway to evaluate information technology systems, as well as upgrade and integrate the involved APHIS and FSIS databases.

We expect to finalize the concept of operations for FABIS in the near future, and then our efforts will turn to constructing the system (including the necessary interface with the NBIS) and hiring analysts. These individuals will be responsible for analyzing the surveillance information, correlating data, making necessary connections, and providing their assessments to USDA officials, as well as the NBIS. We expect that the FABIS analysts will have broad experiences in, among others, the fields of animal and plant health (epidemiology), food safety, port operations and inspection, agriculture security, and risk analysis and communication.

Once fully operational, FABIS will produce a comprehensive and fully coordinated view of FSIS' and APHIS' surveillance information. This will facilitate timely analysis of data across both agencies and provide a common operating picture of the health of U.S. agriculture. We expect that the results, among others, will be:

- Increased situational awareness and early warning capabilities;
- Better information to assist with estimating risks to animal-, plant-, and food-related human health, and the agricultural economy;
- Enhanced responses to recognized, emerging, or potential threats to U.S. food and agriculture supplies;
- Significant savings in terms of disease containment;

USDA and DHS Cooperative Biosurveillance Efforts

As the narrative above illustrates, USDA is pleased to have a close working relationship with our DHS colleagues as they move forward with development of the NBIS. USDA officials have been active participants in the interagency planning meetings on NBIS convened by DHS. We recognize the important benefits further coordination and analysis of information collected by our animal health surveillance systems will bring to our safeguarding systems, emergency preparedness, and homeland security missions.

USDA is therefore working as expeditiously as possible to develop the FABIS and, once operational, connect the system to the NBIS. USDA looks forward to entering into a formal agreement with DHS in the future that outlines how we will share information from FABIS, as well as the kind of information we can expect to glean from the NBIS. This agreement will also cover the detail of USDA analysts to NBIS to assist with the examination and coordination of agriculture-related data. We fully expect a successful partnership and, again, look forward to the many benefits for U.S. agriculture.

Summary of USDA Animal Health Surveillance Programs

I'd like to conclude my testimony by briefly summarizing several of APHIS' existing animal health surveillance systems that will contribute data to FABIS and, by extension, the NBIS. I would like to note that these systems encompass both domestic and international surveillance efforts. Again, by closely monitoring pests and diseases, we can better protect U.S. agriculture by adjusting our safeguarding systems, to include, when necessary, additional border controls, enhanced domestic surveillance, and greater

emergency preparedness. I am happy to provide more specific information on these systems and how we utilize them following the conclusion of my testimony.

Offshore Pest Surveillance

APHIS currently maintains the Offshore Pest Information Program (OPIP). OPIP is a structured, risk-focused process designed to collect, synthesize/analyze, and communicate relevant offshore agricultural pest and disease information. APHIS plant and animal health specialists located overseas monitor and track agricultural pest and disease situations for OPIP reporting. In addition, domestically, APHIS has the capability to monitor pest and disease events in other countries, and this information is added to OPIP as well. APHIS then utilizes all this information to adjust our safeguarding systems accordingly.

Laboratory Networks

USDA coordinates three laboratory networks – the National Animal Health Laboratory Network (NAHLN), the National Plant Diagnostic Network (NPDN), and the Food Emergency Response Network (FERN).

The NAHLN supports APHIS' animal health testing efforts and is comprised of State and university diagnostic laboratories (currently 49 laboratories across 48 states), which can rapidly and accurately detect and report to APHIS possible occurrences of significant animal diseases. NAHLN ensures sufficient capacity and timeliness in veterinary diagnostic testing. Through a standards-based approach, the network provides reporting for foreign animal disease agents, as well as more routine domestic animal diseases, such as bovine tuberculosis and brucellosis. The NAHLN electronically sends testing information to APHIS' other pertinent databases that collect animal disease surveillance information.

The FERN, a joint effort between USDA/FSIS and the Department of Health and Human Services' Food and Drug Administration (HHS/FDA), is a nationwide laboratory network that integrates existing federal and state food testing laboratory resources capable of analyzing foods for agents of concern. The primary objectives of the FERN include prevention (federal and state surveillance sampling programs to monitor the food supply); preparedness (strengthening laboratory capacity and capabilities); response (surge capacity to handle terrorist attacks or a national emergency involving the food supply); and recovery (supporting recalls, seizures, and disposal of contaminated food to restore confidence in the food supply). There are 130 laboratories representing all 50 states and Puerto Rico that have satisfactorily completed the FERN laboratory Qualification Checklist, which provides vital information to determine if a lab meets the criteria for participation in FERN and is eligible for Federal funding.

In FY 2005, FERN was able to offer cooperative agreements to 26 State laboratories, which enhanced the current capability and capacity of the USDA and FDA laboratories participating in FERN. Of these 26 laboratories, FSIS has cooperative agreements with the 18 State microbiological laboratories to begin to build what is, at this time, a very limited capacity to test for biological threat agents in food, while HHS/FDA

has agreements with 8 State chemical laboratories to develop capacity to respond to chemical attacks on the food supply. Due to the critical importance of FERN, USDA's budget request for fiscal year 2007 included an increase of $15.8 million for food and agriculture defense. Of this, $13 million will go to build laboratory capacity for FERN, and $2.5 million will be used for a repository for analytical methods and electronic communication in real-time between the laboratories for more rapid, timely information sharing and response. With the $13 million FERN request for FY 2007, FSIS will be able to ensure that the original 18 laboratories plus five additional laboratories are fully operational FERN labs.

EMRS

The Emergency Management Response System (EMRS) is a web-based incident management system used by APHIS during emergency situations at the Incident Command Post level to manage and investigate outbreaks of foreign animal diseases in the United States. In the event of such situations, maps of real-time outbreak areas and premises data from the EMRS can assist USDA officials in making decisions regarding the size of quarantine zones and appropriate movement controls to prevent further disease spread. APHIS also utilizes EMRS for information on routine reporting of foreign animal disease investigations, State-specific disease outbreaks or control programs, and natural disasters involving animals.

eVe

APHIS' Emerging Veterinary Events database (eVe) is a system for event-based animal health information. The system collects, tracks, analyzes, and forecasts emerging animal health events. The system also serves as an information-sharing tool. Information entered into eVe comes from electronic open-source searches, personal contacts, field reports, and outside communications. The open source electronic material in eVe is mainly obtained through a data-mining effort using sophisticated software. Analysts at APHIS' Center for Emerging Issues, a part of the Agency's Centers for Epidemiology and Animal Health in Ft. Collins, Colorado, run information collected from news services, web sites, and listserves through specialized queries, manually filter the data extracted by the queries, and save relevant animal health event information in eVe for further sharing and analysis. This information can also be combined with other existing animal health information contained in the OPIP and EMRS databases to provide APHIS officials with more complete assessments of potential animal disease risks to the United States from sources abroad.

GDB

APHIS' Generic Database (GDB) helps to provide animal health program management for the Agency's routine surveillance programs. Information on cooperative Federal/State efforts such as herd health inspections, herd certifications, vaccinations, herd inventories, and related activities is contained in the GDB. Information on active surveillance activities is also coupled with NAHLN data. Among other initiatives, the GDB will soon capture routine avian influenza surveillance data. Numerous testing programs are underway to look for specific strains of the avian influenza virus (H5 and H7 strains) that, if not addressed, present a risk to poultry health and can also potentially

mutate into more virulent disease strains. Aggressive surveillance testing is being done for commercial poultry prior to slaughter, in wild birds migrating through the United States, and poultry that pass through live bird markets.

Conclusion

Collectively, USDA's efforts are an important part of the Federal government's plan for the coordinated evaluation of all biosurveillance information collected in the United States. Thank you again for the opportunity to testify before the Subcommittee on behalf of USDA. I am happy to answer any questions you might have regarding my testimony.